

WATER RESOURCE ENGINEER

DEFINITION: Under general direction, performs professional water resource engineering and geology work of considerable difficulty in the administration, planning, litigation and conservation of protection and improvement of water resources; performs related work as assigned.

ESSENTIAL FUNCTIONS: This list is ILLUSTRATIVE ONLY and is not a comprehensive listing of all functions and tasks performed by incumbents of this class.

TASKS:

Plans, evaluates and reviews programs and projects to develop, conserve, adjudicate, control and distribute water supplies and resources; reviews proposed and existing federal, state, Navajo Nation, and private water development projects taking place within the boundaries of the Navajo Nation; performs a broad range of agricultural planning and management functions to assist Farm Boards and individual farmers in planning, development, and operations and maintenance of their agricultural enterprise.

Gathers data for water rights litigation; hydrologic investigations, engineering investigations, and agronomic evaluation; compiles and analyzes water rights, water resources management, and related data from a variety of sources, including field measurements, calculations, and observations and evaluations of historical records, maps and aerial photos.

Conducts field inspections to evaluate watershed protection, flood prevention, rechannelization project, the hydrologic adequacy and structural stability of existing dams and reservoirs; conducts investigations, performs calculations, compiles data, and solves complex hydrologic problems; makes recommendations relating to the various water user applications.

Determines the sequence, structure, and relationship of geological formulations as they affect the movement of ground water, its occurrence, quality and supply; analyzes individual wells and determines the affect pumpage will have on the stream flow; analyzes entire ground water basins to plan for the most beneficial use of the contained ground water within the legal framework.

Prepares annual funding budgets and scope of work recommendations for contracts; coordinate with federal, state, counties, tribal departments and interdepartmental branches; prepares project specific GIS maps and complex spreadsheets; reviews work of administrative/technical support staff for technical accuracy; draft official response to inquires regarding interpretations of Navajo Nation Water Code and Branch policies; answers public inquires concerning water resources of the Navajo Nation.

KNOWLEDGE, SKILLS AND OTHER CHARACTERISTICS:

Knowledge of principles, practices, and techniques of geological investigations.

Knowledge of the methods, techniques and equipment used in well drilling.

Knowledge of the principles of hydraulics as applied to surface and groundwater flow.

Knowledge of dam and other waterway structures, locations, design, construction, and routing.

Knowledge of Tribal, state, and federal regulations on governing surface and ground water.

Skill to interpret hydraulic engineering plans, maps, filings and specifications.

Skills to conduct technical research and analyze results.

Skill to meet and deal with professional and technical disciplines, water users, administrators, legislators, and other interested parties.

Skill in the use of standard surveying and water measuring instruments

THE NAVAJO NATION

Class Code: 3020
Natural Resources and Parks Series
Water Development Group
Overtime Code: Exempt
Pay Grade: 67

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Skill in preparing and presenting technical research results in a clear graphical, written or oral format.

PHYSICAL REQUIREMENTS AND WORK ENVIRONMENT: Work is in an office environment; with field activity responsibilities as required, which can be rough, wet, cold or hot. Hiking and walking over rough terrain can be extensive.

MINIMUM QUALIFICATIONS: A Bachelors degree in Civil or Geological Engineering; and three (3) years experience in water resources engineering. Must possess a valid state driver's license.

Depending upon the needs of the Nation, some incumbents of the class may be required to demonstrate fluency in both the Navajo and English languages as a condition of employment.